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AUTHOR Alishio, Kip C.; Schilling, Karen Maitland
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ABSTRACT

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Sex Differences in Intellectual and Ego Development

Kip C. Alishio and Karen Maitland Schilling

Miami University

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Abstract

Perry's scheme of intellectual and ethical development was examined for sex differences with respect to content areas for which sex differences have elsewhere been suggested: occupational choice, interpersonal relationships, and sexual identity. In addition, the content area religion and ego development, as measured by Loevinger's sentence completion test (SCT), were examined. Thirty-one females and twenty-nine males participated. An interview format which applied Perry's unstructured approach to each of the four areas was utilized. Transcribed interviews and SCTs were rated blind. Structural as well as content analyses were performed. Structural analyses revealed no significant sex differences overall or by content area. However, multiple and step-wise regression analyses revealed patterns in which male identity processes consistently focused upon occupational issues while female identity focused upon interpersonal and sexual issues. Content analyses suggest that women focus their interpersonal worlds developmentally upon issues of trust while men focus upon issues of rightness. Results are interpreted in the context of recent works by Chodorow and Gilligan concerning sex differences in development.

Sex Differences in Intellectual and Ego Development

Perry (1968, 1970) has developed a primarily cognitive theory of late adolescent identity development which outlines a logical progression in the assumptions that college students make in their constructions of truth and knowledge. These assumptions range from belief in the basic duality of knowledge as either right or wrong, through assumptions of the existence of multiple truths, to assumptions of the relative nature of truth, ultimately requiring personal commitments within this relativistic context.

Perry's original studies included nearly all men and left issues of sex differences essentially unexamined. Perry (1970) noted that those who served as judges in his study agreed informally that although men and women appeared not to differ in their movement along the structural schematic forms, "differences were evident in the content and manner of the students' reports rather than in those structurings of experience relevant to the developmental scheme" (p. 16). Subsequent research using Perry's scheme has either focused on all-female samples (Clinchy, Lief, & Young, 1977; Knefelkamp, Widick, & Stroad, 1976) or has included both sexes but ignored sex differences (Kurfiss, 1977). No study reviewed has examined sex differences in development.

Indications of possible sex differences in the content and manner of reports derive from research using Marcia's (1966) categorization of styles of resolving the primary late adolescent task of identity vs. role confusion (Erikson, 1963, 1968), and from the more recent work of Chodorow (1978) and Gilligan (1982) concerning sex differences in interpersonal functioning. Using the Marcia categories, Waterman and Nevid (1977) reported that females were more often classified in the achievement or moratorium status on the content of premarital sex than were men. Similar studies (Hodgson & Fischer,

1979; Marcia & Friedman, 1970; Matteson, 1977; Orlofsky, 1978) suggest there is value in separating the content area of sexual relationships from that of other interpersonal relationships and that women may be more developed than men in this area. Chodorow (1978) suggested that females' interpersonal focus is related to the fact that girls need not shift primary object identifications as boys do, and that women are universally responsible for early child care. Gilligan (1982) has argued that this interpersonal focus leads women to develop more relativistic reasoning, particularly in moral and intellectual situations which have interpersonal implications. Finally, there are some indications that men may be more developed in the area of occupation (Schenkel & Marcia, 1972), though these results have not been replicated (Waterman & Nevid, 1977).

Intellectual and Ego Development as Measures of Identity

Whereas Perry's scheme focuses primarily upon cognitive processes, Loevinger (1976) argues that her scheme of ego development encompasses the entire self, including the development of self-awareness and freedom as well as impulse control, character structure, and interpersonal style. Loevinger (1976) argues that whereas ego development encompasses intellectual development, it cannot be defined in terms of it. Used together, Loevinger's and Perry's schemes may provide a more complete assessment of late adolescent identity development by framing identity as an integrated constellation of structures and values. Such an approach would allow a more complete examination of relationships among the constituent parts of identity in contrast to searching for differences between parts of identity across content areas, thus achieving a more faithful representation of a dynamic conception of personality. A significant relationship between these schemes is hypothesized.

Following the suggestion by Perry, it is hypothesized that men and women

will not differ in their mean level of intellectual development. However, it is predicted that (1) women will reflect a higher degree of development in the areas of sexual identity (SID) and interpersonal relations (IR), and (2) men will reflect a higher degree of development in the area of occupation (OCC). No sex differences in the area of religion (REL) are expected. Further, it is predicted that for women intellectual development in the areas of interpersonal relations and sexual identity will be more highly related to overall intellectual and ego development (EGOL) than it is for men, and that for men intellectual development concerning occupational issues will be more highly related to overall intellectual and ego development than it is for women.

Method

Subjects

Twenty-nine male and 31 female college students participated in the study. They ranged in age from 17 to 30 years, with a mean age of 20 (*SD* = 2.11) and an average of two years of college (*SD* = 1.03).

Procedures

Subjects were asked to take part in a study examining the various ways that students experience college. They were told that they would complete a brief personality form (Loevinger's SCT) and then talk for 30 to 45 minutes with an interviewer about their college experience. The interviewer explained that the primary purpose of the study was to examine the various ways that students experience college in an attempt to better understand the effect of college on students. They were told that they would be asked to talk about four very broad areas of their lives, one at a time, but that they need not feel constrained within any area. Rather, they were encouraged to talk about anything that stood out for them at any time.

The interviews. Following Perry's (1970) assumption that validity is

enhanced by having one interview as similarly unstructured as the next, the interviewer asked the subject to focus upon her/his thoughts concerning occupation, interpersonal relations, religion and values, and sexual identity, and to relate what stood out in relation to each issue. No further clarification was provided. The interviewer used a primarily reflective mode of interaction, though prompts aimed at clarification and elaboration were also used. The shift to a new content area involved a definite break in thought through the request, "Now let's focus upon the area of . . . . What about this stands out for you during the past year?"

The order of introduction of the four content areas was varied to control for the order effects associated with initial discomfort and uncertainty of the subjects. Trained interviewers, two women and one man, conducted the interviews. Sex of subject was counterbalanced with sex of interviewer.

Scoring the interviews. The 60 audio-taped interviews with identifying information deleted were transcribed and divided into four content subinterviews. These subinterviews were independently scored by two raters trained in use of the Perry scheme. Scoring was done as blind as possible to sex of subject, year in college, and age. Each content area was rated separately across subjects, and the order of presentation of subjects for scoring was varied from one content area to the next.

A manual of basic structural clues by content area based on Perry's original work, work by Rodgers (1979), and pilot interviews was assembled (Notes 1 and 2). Each part interview was assigned a rating consisting of a dominant and possible subdominant position where "dominant" describes the position that a rater sees the excerpt best fitting and "subdominant" describes the next best level of assessment, if any. Scoring of subdominant

positions was thought of in terms of a developmental moving towards or a moving away from a given position. After independent ratings, the raters reached a final rating via a jurying procedure.

Each content area was viewed as a part-rating to be combined with the three other part-ratings using an established algorithm consistent with those used in stage methodologies (Harvey, Hunt, & Schroeder, 1961; Kohlberg, 1969; Loevinger & Wessler, 1970; Perry, 1968). If three or more of the four dominant ratings were equal, or if the same two positions were rated interchangeably as dominant and subdominant across content areas, the overall Perry rating (OPR) was assigned as that dominant rating plus a subdominant rating if it was obviously warranted by frequent appearance across content areas. If at least three of the areas were rated at the same dominant or subdominant position, then OPR was assigned as that position plus a subdominant rating if warranted. If a student's part-ratings fit neither of these algorithms, an OPR was assigned based on a logical weighting of the positions present. The scoring rules tend toward characterizing persons at or above their dominant level but typically below their highest level expressed. In all cases, the algorithm was applied blind to content area and all subject characteristics.

Fifty-seven percent of the ratings fit the first scoring algorithm, and another 30% of the ratings could be determined using the second formula. Only eight of the 60 (13%) ratings fit neither combining algorithm, yet six of these yielded an obvious logical OPR based on the consistency of the four ratings present. In only two of the 60 ratings was a rational OPR not obvious. In both of these cases an OPR was assigned to the mean of the four content areas.

Scoring the SCTs. SCTs were scored by a group of three raters trained

on Loevinger's scheme of ego development. Ratings were done blind to all subject characteristics except sex. Each protocol received two scores for statistical purposes, an ego level score and a sum-algorithm score which is a mean of a subject's 36 item ratings.

Results

Interrater reliability for the scoring of intellectual development, as measured by percent agreement within one position (Davidson, King, Kitchener, & Parker, 1980), ranged from 80% to 88% across content areas. No significant differences exist in the reliability of ratings of those areas presumed to be more affective (IR = 87%; SID = 88%) than cognitive (OCC = 80%; REL = 83%), or for ratings of reports of men (OCC = 87%; REL = 69%; IR = 79%; SID = 79%) as compared to women (OCC = 77%; REL = 84%; IR = 94%; SID = 97%).

Interrater reliability of ego development, based on a random sampling of 20 SCTs (720 ratings), was 73% as measured by exact agreement.

Analysis of Means

No sex differences in the mean levels of overall intellectual development or in the mean levels of the four content areas were observed. However, differences were observed in the issues upon which each sex focused. Women frequently mentioned trust in some form as they talked about relationships, while men approached heterosexual relationships as a task of "finding the Right One," and rarely mentioned trust. The differentiating aspect was the relative focus of attention of the sexes: the core issues around which other aspects of relationship were structured. A developmental progression of thinking about trust among women and a separate but parallel progression of thinking about involvement in relationships among men were noted. The following is an initial attempt to outline more explicitly these parallel progressions:

Position 1

Men: Focus is upon finding "the Right One" with assumption that such a person exists and can be found if you look hard enough (an opening to Position 2).

Women: Trust is interpreted in purely behavioral terms. Self is not differentiated from other significantly to focus upon "trusting in" someone, but only in terms of "trusting that." Any variation from what is expected behaviorally from others is disorienting and anxiety producing.

Position 2

Men: Finding "the Right One" is viewed as a game with changeable rules. Working hard at it is not good enough. Now one must find "the Right Way" to find "the Right One."

Women: Trust is viewed in absolute trust/mistrust dichotomies. Some people can be trusted, others cannot. The recognition of "other" as now separate seems to lead to a capacity to withhold trust <u>until</u> that person is proven safe, where safe is still primarily defined in terms of behavioral predictability, although "how they feel" begins to take on meaning now.

Position 3

Men: New categories of relationships are created to accommodate the perceived diversity in "girls." The search for "the Right One" is now realized to be a long, complicated task, which is now often expressed in a new, exciting desire to "date around." The focus, as with relationships in general, slowly begins to turn inward, but here the focus is still primarily upon the other person, though more on personality characteristics in contrast to the

earlier focus upon behavior.

Women: Trust can now be given in different shades or increments until finally "you can trust him completely." Control of the impulse to automatically trust becomes a very conscious focus of awareness, which leads to initial recognition of personal responsibility and a rather new focus upon "being yourself" (a focus that men arrive at concurrently but seemingly through the need to have a consistent self defined in contrast to other to take into the variety of new categories of relationships).

Position 4

Men: "Different experiences" seem to be elevated to the pinnacle of importance. What one wants in relationship now becomes counterpointed with what the other wants. "The Right One" almost appears to be viewed as someone who can allow you to do your own thing while she does hers.

Women: The concept of trust itself seems to be mistrusted, treated with a sometimes bitter skepticism. To this point trust has always been other-focused, but now it appears to become focused upon self for the first time, but is expressed more often in terms of dependence upon "guys" vs. dependence upon self or trusting in one's feelings.

Positions 5 and 6

Men: Focus on self becomes primary along with a genuine realization of the need to understand one's self in order to develop a relationship with another. Who one is and what one wants become issues--often conflictual--of constant awareness, and the responsibility of balancing these (vs. compromising at position 4)

is fully felt as an internal, not external, struggle.

Women: Here focus also turns most saliently towards one's self as reflected in constant awareness of who one is; but more so than with men, there is a focus upon what one feels. There appears to be here a gradual struggle of learning to trust in one's own emotions and less preoccupation with how the other feels about her. Assuming genuine personal responsibility for these emotions becomes at the same time a horrible burden and a thrilling self-satisfaction.

Relationship Between Intellectual Development and Ego Development

A significant relationship was observed between overall Perry level (OPR) and ego development level (EGOL), Pearson $r = .36$, $p < .01$.

Relationships Among Content Areas and Identity Processes

Table 1 summarizes the relationships between each content area and overall intellectual development for the total sample and by sex. For the entire sample, interpersonal relations (IR) and sexual identity (SID) are associated with OPR to a significantly greater degree than are occupational choice (OCC) and religion and values (REL). This same pattern is reflected in the relationships broken down by sex, with the exception that for men OCC is associated with OPR to a similar degree as are the other areas.

Insert Table 1 about here

The results of the multiple regression analysis for the relationships between content areas and OPR are summarized in Table 2. For the entire sample heavier weightings of IR and SID than OCC and REL in contributing to variability in OPR were noted. The weightings for the content areas do not differ for men. For women OCC and REL account for smaller proportions of the

variance on OPR than do either IR or SID. Tests of the difference between B weights for the same predictor and criterion variables reveal that OCC accounts for more variability [$t(56) = 2.40$, $p < .01$] but IR less variability [$t(56) = 2.00$, $p < .05$] in OPR for men than for women.

Insert Table 2 about here

Relationships Among Content Areas and Ego Development

Moderate relationships were observed between ratings on content areas of OCC, IR, and SID and EGOL. REL was not significantly associated with EGOL. The association between OPR and EGOL is stronger for men ($r = .55$) than for women ($r = .19$), $z = 1.58$, $p < .10$. For men, moderate associations were found between OCC, IR, and SID and EGOL, whereas for women only IR was found to have a significant relationship to EGOL. Multiple regression analysis by sex using EGOL as the criterion shows that women's scores contribute a significantly larger proportion of variability to the relationship between IR and EGOL than do men's [$t(54) = 2.65$, $p < .01$]. Step-wise regression analysis reveals that for men OCC alone achieves a significant weighting [$F(1, 29) = 2.78$, $p < .01$] in predicting EGOL.

Discussion

The interjudge reliability coefficients reported here for ratings of women's interviews are commensurate with those of Perry's (1968) ratings of out-of-context part interviews for a predominantly male sample. The scheme does not appear to suffer markedly as a developmental metaphor from the lack of female representation in the original studies, at least to the extent that women can be reliably rated on structural cues derived from a predominantly male sample.

The fact that 87% of the ratings fit at least one of two stringent

algorithms supports the concept of a core level of cognitive functioning operating across content areas for a given individual. Additionally, the fact that only four of the 60 ratings were rated at the same dominant level across content areas demonstrates that variation within individual protocols could not reasonably be attributed to scoring error in most cases. Rather, these data strongly support the notion of a décalage of structural development among content areas.

It has been suggested here that men and women approach identity tasks through qualitatively different processes. This is reflected in the different foci through which men and women approach interpersonal relationships. Men appear to focus upon issues of succeeding in finding "the Right One," a task which by nature has a success or accomplishment (in socially defined terms) aspect, as well as an inherent counterpointing of self and other. For men, then, the task of relationship development is approached primarily via foci of achievement, and development and maintenance of autonomy. Women, on the other hand, focus developmentally upon issues of trust in relationships, a focus which implies a merging aspect, as well as an underlying continuity of self and other. For women, then, relationships are approached primarily via foci of intimacy and attachment. Whereas the male emphases upon autonomy and achievement appear to be associated with a relatively homogeneous weighting of the four content areas, the female emphases upon attachment and intimacy are associated with heavier weighting of life areas of interpersonal relationship and sexuality.

Along similar lines, the higher correlation between assessed levels of intellectual development and ego development for men as opposed to women could be interpreted as reflecting a lack of sensitivity on the part of one or both measures to these integral aspects of female development. The findings

from this study clearly suggest that intellectual and ego development are more complementary processes for women than for men. Within the construct of ego development itself different forms of the SCT have been derived for women and men. The male form includes items such as: "A man's job . . .," "When I am criticized . . .," and "He felt proud that he . . . ." These replace female items such as: "My father . . .," "A pregnant woman . . .," "When my mother spanked me, I . . .," and "My husband and I will . . . ." Loevinger (1979) has valid psychometric reasons for including different items by sex which for men clearly have more of a cognitive, evaluative tone and call more for themes of autonomy and achievement, but for women call more for interpersonal and affiliative themes.

If the content of items makes a difference, then comparing a measure of intellectual development with an instrument which taps more cognitive functioning in men and more interpersonal functioning in women quickly reaches limits of valid interpretability. It could be the case that in general women's level of ego development <u>is</u> relatively independent of the manner in which they cognitively structure their worlds. If this were true, though, no current theory accounts for this difference, and the construct of ego development would necessarily require redefinition.

The current study seems to support Gilligan's (1982) comments concerning the inadequacy of current developmental theory in accounting for women's personality and identity formation, specifically her criticisms of Kohlberg's treatment of moral development in women and Erikson's failure to alter his male-based model of identity despite acknowledging the existence of sex differences. Perhaps it is time, as Gilligan suggests, to stop assuming that women are variants of men--ribs from a like body--and question whether the same developmental constructs are central for men and women alike.

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Table 1

Correlations Among Overall Identity Measures and Content Areas

	Religion and values	Inter-personal relations	Sexual identity	Overall Perry rating	Ego level
Occupational choice					
Total	.39	.62	.50	.71	.37
Males	.41	.68	.63	.80	.58
Females	.40	.58	.44	.65	.20
Religion and values					
Total		.61	.49	.73	.11
Males		.62	.58	.74	.19
Females		.62	.43	.72	.03
Interpersonal relations					
Total			.75	.90	.40
Males			.78	.89	.52
Females			.64	.91	.30
Sexual identity					
Total				.84	.32
Males				.87	.53
Females				.83	.18
Overall Perry rating					
Total					.36
Males					.55
Females					.19

Table 2

Multiple Regression Analyses: Content Areas on Overall Perry Rating

Content area	Normalized B weights		
	Entire sample	Males only	Females only
Occupational choice	.22	.29	.16
Religion and values	.25	.25	.26
Interpersonal relations	.36	.29	.40
Sexual identity	.34	.31	.35
Multiple R (unbiased correction)	.97	.98	.97